

In the claims

Please cancel claims 1-20 and add new claims 36-112:

1-35. (canceled)

36. (New) A stent comprising:

a tubular body having proximal and distal ends and a lumen extending therebetween, and a wall defining a web structure configured for expansion from a collapsed delivery configuration to an expanded deployed configuration,

wherein the web structure comprises a plurality of neighboring web patterns of alternating concavity that extend circumferentially around the wall, each web pattern including a plurality of arcuate webs interconnected by bends, neighboring web patterns interconnected by transition sections, wherein at least two of the transition sections are separated, around the circumference of the wall, by at least three arcuate webs; and

a coating on the web structure that comprises a therapeutic agent.

37. (New) The stent of claim 36, wherein the therapeutic agent is chosen from the group consisting of therapeutic agents that retard thrombus formation, therapeutic agents that retard restenosis, and therapeutic agents for systemic or local delivery via the blood stream.

38. (New) The stent of claim 36, wherein all of the transition sections are separated by at least three arcuate webs.

39. (New) The stent of claim 36, wherein the transition sections define H-shaped structures.

40. (New) The stent of claim 39, wherein at least some of the arcuate webs span two H-shaped structures.

41. (New) The stent of claim 39, wherein at least one of the H-shaped structures is disposed at an angle relative to a longitudinal axis of the stent.

42. (New) The stent of claim 36, wherein each arcuate web comprises at least one substantially straight section.

43. (New) The stent of claim 42, wherein each arcuate web comprises three substantially straight sections.

44. (New) The stent of claim 36, wherein the at least three arcuate webs define an S-shaped structure between interconnections to neighboring web patterns.

45. (New) The stent of claim 36, wherein the stent is balloon expandable.

46. (New) The stent of claim 36, wherein the stent comprises a deformable material.

47. (New) The stent of claim 46, wherein the deformable material is chosen from the group consisting of stainless steel and titanium.

48. (New) The stent of claim 36, wherein the stent is self-expanding.

49. (New) The stent of claim 36, further comprising a radiopaque feature.

50. (New) A stent comprising:

a tubular body having proximal and distal ends and a lumen extending therebetween, and a wall defining a web structure configured for expansion from a delivery configuration to a deployed configuration,

wherein the web structure comprises a plurality of neighboring web patterns of alternating concavity that extend circumferentially around the wall, each web pattern including a plurality of arcuate webs interconnected by bends, at least some of the neighboring web patterns interconnected by transition sections separated, around the circumference of the wall, by at least two bends; and

a coating on the web structure that comprises a therapeutic agent.

51. (New) The stent of claim 50, wherein the therapeutic agent is chosen from the group consisting of therapeutic agents that retard thrombus formation, therapeutic agents that retard restenosis, and therapeutic agents for systemic or local delivery via the blood stream.

52. (New) The stent of claim 50, wherein the neighboring web patterns are interconnected by transition sections separated, around the circumference of the wall, by at least four bends.

53. (New) The stent of claim 50, wherein the transition sections define H-shaped structures.

54. (New) The stent of claim 50, wherein at least some of the arcuate webs span two H-shaped structures.

55. (New) The stent of claim 53, wherein at least one of the H-shaped structures is disposed at an angle relative to a longitudinal axis of the stent.

56. (New) The stent of claim 50, wherein each arcuate web comprises at least one substantially straight section.

57. (New) The stent of claim 56, wherein each arcuate web comprises three substantially straight sections.

58. (New) The stent of claim 50, wherein transition sections interconnecting each web pattern to neighboring web patterns are separated by three arcuate webs that define an S-shaped structure.

59. (New) The stent of claim 50, wherein the stent is balloon expandable.

60. (New) The stent of claim 50, wherein the stent comprises a deformable material.

61. (New) The stent of claim 60, wherein the deformable material is chosen from the group consisting of stainless steel and titanium.

62. (New) The stent of claim 50, wherein the stent is self-expanding.

63. (New) The stent of claim 50, further comprising a radiopaque feature.

64. (New) Apparatus for supporting a vessel comprising:

a tube having proximal and distal ends and a lumen extending therebetween, the tube comprising a web structure having a collapsed state and an expanded state,

wherein the web structure comprises a plurality of neighboring web patterns of alternating concavity, each web pattern including a plurality of arcuate webs, at least some of the neighboring web patterns interconnected by transition sections that define apertures having three intercommunicating S-shaped openings; and

a coating on the web structure that comprises a therapeutic agent.

65. (New) The apparatus of claim 64, wherein the therapeutic agent is chosen from the group consisting of therapeutic agents that retard thrombus formation, therapeutic agents that retard restenosis, and therapeutic agents for systemic or local delivery via the blood stream.

66. (New) The apparatus of claim 64, wherein the transition sections define H-shaped structures that span adjacent pairs of arcuate webs.

67. (New) The apparatus of claim 66, wherein at least one of the H-shaped structures is disposed at an angle relative to a longitudinal axis of the tube.

68. (New) The apparatus of claim 64, wherein each arcuate web comprises at least one substantially straight section.

69. (New) The apparatus of claim 68, wherein each arcuate web comprises three substantially straight sections.

70. (New) The apparatus of claim 64, wherein transition sections interconnecting a web pattern to a neighboring web pattern are separated by three arcuate webs that define an S-shaped structure.

71. (New) The apparatus of claim 64, wherein the tube is balloon expandable.

72. (New) The apparatus of claim 64, wherein the tube comprises a deformable material.

73. (New) The apparatus of claim 72, wherein the deformable material is chosen from the group consisting of stainless steel and titanium.

74. (New) The apparatus of claim 64, wherein the tube is self-expanding.

75. (New) The apparatus of claim 64, further comprising a radiopaque feature.

76. (New) A stent comprising:
a tube having a web structure configured to transition between a contracted state and an expanded state,

wherein the web structure comprises a plurality of neighboring web patterns of alternating concavity, each web pattern including a plurality of arcuate webs interconnected by bends, neighboring web patterns interconnected by transition sections, at least some of the transition sections between any two neighboring web patterns being arranged around the circumference of the tube with a common orientation and offset by at least one intervening bend; and

a coating on the web structure that comprises a therapeutic agent.

77. (New) The stent of claim 76, wherein the therapeutic agent is chosen from the group consisting of therapeutic agents that retard thrombus formation, therapeutic agents that retard restenosis, and therapeutic agents for systemic or local delivery via the blood stream.

78. (New) The stent of claim 76, wherein the arcuate webs have a first width relative to the circumference of the tube, and the transition sections have a second width relative to the circumference of the tube, wherein the second width is about twice the first width.

79. (New) The stent of claim 76, wherein the transition sections define H-shaped structures.

80. (New) The stent of claim 79, wherein at least one of the H-shaped structures is disposed at an angle relative to a longitudinal axis of the tube.

81. (New) The stent of claim 76, wherein each arcuate web comprises at least one substantially straight section.

82. (New) The stent of claim 81, wherein each arcuate web comprises three substantially straight sections.

83. (New) The stent of claim 76, wherein transition sections interconnecting each web pattern to neighboring web patterns are separated by at least three arcuate webs that define an S-shaped structure.

84. (New) The stent of claim 76, wherein the stent is balloon expandable.

85. (New) The stent of claim 76, wherein the stent comprises a deformable material.

86. (New) The stent of claim 85, wherein the deformable material is chosen from the group consisting of stainless steel and titanium.

87. (New) The stent of claim 76, wherein the stent is self-expanding.

88. (New) The stent of claim 76, further comprising a radiopaque feature.

89. (New) A stent comprising:
a tube having proximal and distal ends and a lumen extending from the proximal to the distal end, the tube comprising a web structure having a contracted delivery state and an expanded deployed state,

wherein the web structure includes a plurality of neighboring web patterns of alternating concavity, each web pattern including a plurality of arcuate webs, neighboring web

patterns interconnected by transition sections that span pairs of adjacent arcuate webs, at least some of the transition sections of neighboring patterns offset by at least one additional arcuate web; and

a coating on the web structure that comprises a therapeutic agent.

90. (New) The stent of claim 89, wherein the therapeutic agent is chosen from the group consisting of therapeutic agents that retard thrombus formation, therapeutic agents that retard restenosis, and therapeutic agents for systemic or local delivery via the blood stream.

91. (New) The stent of claim 89, wherein the transition sections define H-shaped structures.

92. (New) The stent of claim 91, wherein at least one of the H-shaped structures is disposed at an angle relative to a longitudinal axis of the stent.

93. (New) The stent of claim 89, wherein each arcuate web comprises at least one substantially straight section.

94. (New) The stent of claim 93, wherein each arcuate web comprises three substantially straight sections.

95. (New) The stent of claim 89, wherein transition sections interconnecting a web pattern to a neighboring web pattern are separated by three arcuate webs that define an S-shaped structure.

96. (New) The stent of claim 89, wherein the stent is balloon expandable.

97. (New) The stent of claim 89, wherein the stent comprises a deformable material.

98. (New) The stent of claim 97, wherein the deformable material is chosen from the group consisting of stainless steel and titanium.

99. (New) The stent of claim 89, wherein the stent is self-expanding.

100. (New) The stent of claim 89, further comprising a radiopaque feature.

101. (New) Apparatus for supporting a vessel comprising:

a tubular body having a web structure defining a wall, the web structure configured to transition between a collapsed state and an expanded state,

wherein the web structure comprises a plurality of neighboring web patterns, each web pattern including a plurality of arcuate webs interconnected by bends, the arcuate webs of neighboring web patterns alternating between concave and convex forms relative to a longitudinal axis of the tubular body, the neighboring web patterns interconnected by H-shaped transition sections separated, around a circumference of the wall, by at least two bends; and

a coating on the web structure that comprises a therapeutic agent.

102. (New) The apparatus of claim 101, wherein the therapeutic agent is chosen from the group consisting of therapeutic agents that retard thrombus formation, therapeutic agents that retard restenosis, and therapeutic agents for systemic or local delivery via the blood stream.

103. (New) The apparatus of claim 101, wherein the arcuate webs have a first width relative to the circumference of the tubular body, and the H-shaped transition sections have a second width, relative to the circumference of the tubular body, about twice the first width.

104. (New) The apparatus of claim 101, wherein at least one of the H-shaped transition sections is disposed at an angle relative to a longitudinal axis of the tubular body.

105. (New) The apparatus of claim 101, wherein each arcuate web comprises at least one substantially straight section.

106. (New) The apparatus of claim 105, wherein each arcuate web comprises three substantially straight sections.

107. (New) The apparatus of claim 101, wherein the H-shaped transition sections interconnecting each web pattern to neighboring web patterns are separated by three arcuate webs that define an S-shaped structure.

108. (New) The apparatus of claim 101, wherein the tubular body is balloon expandable.

109. (New) The apparatus of claim 101, wherein the tubular body comprises a deformable material.

110. (New) The apparatus of claim 109, wherein the deformable material is chosen from the group consisting of stainless steel and titanium.

111. (New) The apparatus of claim 101, wherein the tubular body is self-expanding.

112. (New) The apparatus of claim 101, further comprising a radiopaque feature.

Respectfully submitted,



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